

Southern Regional Research Laboratory
New Orleans 19, Louisiana

March 26, 1948

To: Director and Laboratory Staff
From: Survey and Appraisal Section, Cotton Processing Division
Subject: SURVEY NOTES

FARM SITUATION

By mid February, prices received by farmers declined 9% from the record in January and were near the level of mid - 1947. Biggest drop was 22% decline in food grains. Basic demand factors for farm products are strong. Consumer incomes remain high. Industrial production continues near capacity Even if food production in Europe improves as now expected, foreign requirements for U. S. foods are likely to remain large, although perhaps at a somewhat lower level than recently.... If the abrupt decline in some commodity prices impairs business confidence, some of the forces responsible for the high activity last year, such as plant expansion and inventory accumulation, may diminish.

Demand and Price Situation, BAE, March 9th. 1948

(In this connection Frank L. Walton, formerly director of Textile-Branch, W.P.B., said "There will be a demand for every yard of cotton textiles produced this year.")

LINT COTTON

Cotton consumption continues off from year ago. Consumption of cotton during the 7 months of August - February 1947-48 totaled 5,422,600 bales or 10.4 percent below the 6,052,800 bales consumed during this period last year. Exports during the 6 months August through January totaled 871,900 bales as compared with 1,865,700 bales during the same period last year - a decrease of almost one million bales.

Weekly Cotton Market Review, P.M.A. Mar. 19, 1948

Table 1.- Cotton consumption and stocks, and
spindle hours in cotton mills

| | February 1948 | January 1948 | December 1947 | February 1947 |
|----------------------------------|------------------|-----------------|------------------|------------------|
| Consumption bales | 785,231 | 860,202 | 753,406 | 840,463 |
| On hand, 1000 bales | 6,713 | 7,339 | 7,632 | 6,533 |
| Active spindle hours, billions.. | 9.8 | 10.8 | 9.5 | 9.6 |
| Spindle activity, percent of ... | | | | |
| 80-hour capacity | 137.6 | 139.0 | 121.3 | 130.8 |

From Census Reports.

COTTON ACREAGE GOAL SLIGHTLY HIGHER THAN LAST YEAR'S 1948 PLANTED ACREAGE.

The final cotton acreage goal for 1948 was set at 21,894,000 acres, slightly more than last year's planted acreage of 21,387,000 bales, by the Secretary of Agriculture (Weekly Cotton Market Review, March 19). The Daily News Record for March 4th said a survey showed farmers intended to plant 22,200,000 acres. (Last year's cotton production was 11,694,000 bales).

COTTON PRICES RISE; PREMIUM FOR LONG STAPLES HAS INCREASED.

Cotton prices have increased nearly two cents per pound in the last month with the delivered-at-mill price for Middling 15/16" now 35.13 cents, 3 cents greater than for viscose staple fiber. October, New York, futures are selling at 31.17 cents as compared with 33.93 cents for May. As noted below the premiums for long staple cotton are much larger than they were last November and a year ago with 1 1/4" cotton of Middling grade now selling for 50.43 cents on the Memphis Market.

Table 2.- Prices of raw cotton, rayon staple, and cotton fabrics, and cotton mill margins in cents

| | March 18 | February 18, 1948 | January 1948 | December 1947 | March 1947 |
|------------------------------|----------|-------------------|--------------|---------------|------------|
| Cotton, Middling 15/16" | | | | | |
| delivered at mills, lb.... | 35.13 | 33.18 | 36.45 | 37.12 | 36.55 |
| Rayon, viscose staple, | | | | | |
| equivalent price 1/1, lb.... | 32.04 | 32.04 | 32.04 | 30.44 | 28.48 |
| Cotton fabrics, average | | | | | |
| 17 constructions 2/..... | - | - | 94.57 | 95.88 | 88.19 |
| Mill Margins 3/ | | | | | |
| Average, 17 cotton fabrics: | * | - | 59.63 | 60.29 | 53.37 |
| Average, 6 printcloths..... | - | - | 94.17 | 97.94 | 78.69 |
| Average, 3 sheetings..... | - | - | 45.63 | 44.44 | 44.36 |
| Average, 4 drills | - | - | 35.94 | 34.84 | 33.81 |
| Average, 2 ducks | - | - | 31.04 | 29.95 | 30.07 |

1/ Cost to mill of same amount of usable fiber as supplied by one pound of cotton (rayon price x.89).

2/ Price of approximate quantity of cloth obtainable from a pound of cotton with adjustments for saleable wastes. (Cotton Branch, P.M.A.).

3/ Difference between cloth prices and prices (10-market average) of cotton assumed to be used in each kind of cloth. (Cotton Branch, P.M.A.).

Table 3.- Premiums and discounts for designated grade and staples of cotton, Memphis, in points (hundredths of cents)

| | M 13/16" | M 1 1/4" | LM 15/16" | SM 15/16" |
|----------------|----------|----------|-----------|-----------|
| March 18, 1948 | -350 | +1650 | -530 | +10 |
| November, 1947 | -325 1/ | +1283 | -422 | +35 |
| March, 1947 | -265 | + 581 | -455 | +55 |
| | | | | |

1 New Orleans.

COTTON EXPORT SUBSIDY CUT

The cotton export subsidy was cut from the half-cent per pound rate set April 22, 1946 to one-eighth of a cent effective March 3, 1948. A rate was retained so that it would still be in effect later on if needed.

Daily News Record, March 4, 1948, p. 1.

INTERNATIONAL'S FIRST ASSEMBLY LINE PICKER COMPLETED FEB. 18 TH.

International Harvester Company announced completion of the first mechanical cotton picker ever made by assembly line methods. The new mass production techniques will speed the machines to farmers at the rate of 100 a month, according to Adam Condo, Memphis works manager. Technically, the new assembly-line machine is a one-man single-row picker of the "selective" type which harvests cotton from open bolls without damaging those unopened. It was designed for areas in which several pickings are necessary, such as the rich Delta region. The picker's normal working speed is two miles an hour on first pickings and about 2-3/4 miles an hour on scrap pickings. Under normal conditions in a normal season each picker has an estimated capacity of 200 acres. Mr. Condo said that tests have shown the new picker can harvest at least 95 per cent of the open cotton in a field without damaging immature bolls.

Daily Mill Stock Reporter, Feb. 19, 1948 p.1.

COTTON TEXTILE INDUSTRY

U. S. RUBBER PURCHASES WEAVING MILLS

In order to utilize carding and spinning equipment which would be left idle with switch to rayon tire cord, U. S. Rubber has purchased the Seaboard and Stevens Mills at Burlington, N. C., both weaving mills, making fabrics for luggage, draperies, etc. At same time "research and development work on cotton textile products is being intensified."

Daily News Record, Feb. 16, 1948, p. 1.

COTTON GOODS MANUFACTURERS EARN AVERAGE OF 40% IN 1947.

According to the monthly letter of the National City Bank of New York (March 1948), 35 cotton goods manufacturers made an average net return (after taxes) on their investment of 40.7 percent, the largest for any of 27 manufacturing industries included in the survey. The return compared with 25.2% in 1946. Profits in other industries of interest to the laboratory are noted in the following table. High business profits was said by the letter to reflect (1) removal of price controls, (2) wind-fall inventory profits, (3) repeal of excess profits tax and lowering of normal tax. Although profits were "record breaking" it is pointed out that so also were wages, farm income, etc.

Table 4.- Percent earnings of manufacturing corporations in the United States, 1946 and 1947. ^{1/}

| No. of cos. : | Industrial Group | Percent 1946 | Percent 1947 | Percent Change |
|------------------|-------------------------|-----------------|-----------------|-------------------|
| 960 | Total manufacturing | 12.5 | 17.1 | +50.2 |
| 35 | Cotton goods | 25.2 | 40.7 | +83.7 |
| 55 | Other textile products | 23.0 | 27.0 | +36.8 |
| 18 | Rubber products | 20.4 | 16.2 | -10.2 |
| 36 | Pulp and paper products | 13.1 | 21.2 | +88.5 |
| 39 | Chemical products | 14.9 | 17.3 | +24.4 |
| 12 | Agricultural implements | 6.6 | 12.4 | +99.4 |

^{1/} Net income (after depreciation, interest, taxes, etc.) as a percentage of net worth, January 1st. Monthly letter, National City Bank of New York.

C O T T O N P R O D U C T S

WASHABLE NON-WOVEN TOWELS INTRODUCED

New type non-woven towels and wash cloths made of plastic, rayon and cotton, are now being merchandised. Made by the Plaracot Co., Chicago, they wash out when rinsed in soapy water and can be used again. Packed in transparent wrappings like those shown above, the towels, four to a package in four pastel colors, cost 50 cents per set. Wash cloths, 18 x 18, package of 5, list at 40 cents.

Daily News Record, Feb. 18, 1948. p. 32.

DRAPERIES OF UNWOVEN COTTON AND RAYON TO BE SOLD FOR \$1.98 A PAIR

Within the next few weeks, rayon and cotton draperies will be available for \$1.98 a pair. That's considerably cheaper than the cheapest ready-made draperies now being offered at about \$4.95. The new draperies, which are a slick-surfaced cotton about the same weight as gingham, are made out of "unwoven" rayon and cotton fibers. These two types of fibers are combined together plastically. Elimination of the costly processes of weaving fibers

into cloth has resulted in important production economies, making possible a low price on draperies, say the manufacturers. Collaborators on the new product are Trimz Co., Inc., a division of United Wallpaper, Inc., and Avondale Mills, a large Alabama producer of cotton goods. Initial distribution of the new draperies will be through department and variety stores.

Wall Street Journal, Feb. 28, 1948, p. 1.

WM. E. HOOPER INTRODUCES VINYL-COATED DUCK FOR AWNINGS

Wm. E. Hooper & Sons Co. is introducing "a new vinyl-coated awning fabric," treated for fire and mildew resistance and then coated to make it washable and durable and also so the colors will stand up...comparing favorably with vat dyed goods". Price is estimated at double the gray duck but "life of the awning can be prolonged indefinitely," and the new fabric "could be one of the answers to competition of the metal awning".

Daily News Record, March 2, 1948, p. 27.

FURTHER RAYON TIRE CORD EXPANSION UNLIKELY, FIBER-BONDING AND TREND TOWARD LOW PRESSURE TIRES MAY BENEFIT COTTON

Big rayon tire cord producers are now following a "stop, look, and listen," policy in plans to expand rayon tire cord production for following reasons, (1) possible competition from nylon, steel wire, etc.; (2) within a few years 250 million pounds of tire cord production may be sufficient; (3) one-third of total rayon is now sold to the tire industry- "a fickle one"- and caution is therefore indicated; (4) increasing competition from nylon. Although nylon truck tires are in use by heavy trucks on the California and Arizona deserts, "experts talk about the 'flow' or 'grow' of nylon in tires, and point to nylon's tendency to flatten the tire after resting in one position overnight; or for the tires on a dual wheel truck to flow together, thus causing abrasion and speeding wear." This may be overcome by changing nylon's polymeric structure or by improving the finishing step but nylon's high price is a disadvantage. "Great difficulty in securing the adhesion of synthetic rubber to steel textile fiber has been reported."

One or more of the Big Four are said to be interested in acquiring Dan River's fiber-bonding process on a royalty basis, for use not only on cotton but for stabilizing nylon cord.

Trend toward lower air pressures for more comfortable ride may benefit cotton because flexibility "is a quality in which cotton excels, rayon is weak and the qualities of nylon are yet to be proven," - if it does not give steel wire its first big boost. Wider rims may be needed for such a development. DuPont's control of nylon, one of the "Big Four" rubber companies and General Motors is cited in this connection.

Daily News Record, March 6, 1948, p. 4.

MONOLITHIC WALL UNITS NEEDED FOR HOUSING; COTTON SUGGESTED

According to an article entitled "Toward a Science of Housing", "logically, there should be a single material versatile enough in itself to do everything that the present multiple wall and roof materials are

required to do." The National Housing Agency is quoted as follows:

If a building material could be developed which would permit the economical molding by mass-production methods of monolithic self-supporting wall panels, containing all the characteristics which are essential in the exterior and interior walls of a house, as well as self-supporting roof and floor panels, a very important step would have been taken toward solving the problem of excessive housing cost." Such a material, it is stated, might reduce total capital cost of house and land by approximately 30 percent.

Attempts in this direction include an aluminum faced, plastic, honeycombed paper core panel being developed by Lincoln Industries of Marion, Va., in collaboration with Forest Products Laboratory and being used in experimental houses by Douglas, Consolidated Vultee, and Goodyear. Another company, H. H. Ferguson Co. is experimenting with a panel system which uses sheets of corrugated paper glued together and then impregnated with various plastic resins. "Cotton also offers long range possibilities as a building material, although currently its cost is too high. During the war experimental samples were produced by the W. P. B.'s Office of Production Research and Development showing that it is technically possible to float cotton fibers into thin films of plastic and then to laminate these sheets into a hardboard that can be pressed into any desired structural shape. Such cotton-reinforced plastic material, if it can be produced cheaply, would be in demand for the manufacture of sinks and bathtubs as well as for structural panels, and the cotton-growing South would play an important role in the development of the industrialized house."

C. Theodore Larsen, Toward A Science of Housing. Scientific Monthly October 1947.

COMPETITIVE MATERIALS

RAYON INDUSTRY HEAVILY CONCENTRATED IN SOUTH

Three-quarters of all rayon produced in the United States now comes from the Southern States, and this percentage will rise to as much as 90 percent when planned ^{plants} are completed. One rayon executive stated "that he feels the future of the industry lies in the South, from Virginia to Texas." In this connection it is said that "the chemistry of both the acetate rayon process and of nylon is swinging toward hydrocarbons derived from petroleum or its products.

Daily News Record, Feb. 26, 1948, p. 5.

UNIT LABOR COST OF PRODUCING RAYON RISES ONLY SLIGHTLY OVER 1946; UP ONE THIRD OVER 1939.

The output of rayon per man-hour (making adjustments for changes in denier, etc.) has increased 43 percent since 1939 and increased 15 percent from 1946 to 1947. Unit labor cost of producing rayon is now about one-third higher than in 1939, only slightly higher than in 1946.

Table 5.- Production, output per man-hour, and unit labor cost, rayon industry, United States, 1939-1947.

1939 = 100

| Year | Adjusted ^{1/} Production | Output per man-hour | Unit labor cost |
|--------------------|--------------------------------------|------------------------|--------------------|
| 1939 | 100 | 100 | 100 |
| 1940 | 121 | 112 | 93 |
| 1945 | 150 | 120 | 121 |
| 1946 ^{2/} | 160 | 128 | 128 |
| 1947 | 179 | 143 | 132 |

1/ Adjusted to indicate output from year to year if there were no change in types of rayon produced.

2/ Preliminary

Based on "Rayon labor productivity," Rayon organon 17,140 (Sept. 1946), and indexes of Bureau of Labor Statistics as compiled in "Production Studies of Synthetic Fibers and Paper," p. 53.

RAYON SPORTS SHIRTS NOT FULLY WASHABLE DESPITE LABEL CLAIMS

According to J. C. Stirling, Manager of The American Institute of Laundering's Textile Approval Division, "Some day soon consumers will be returning to stores large quantities of sports shirts and other garments made of cotton, rayon and wool because of too much shrinkage and too much color loss. "With few exceptions there are no completely washable rayon sports shirts on the market today, even though the greater majority of them carry labels claiming washability." There has been no return to prewar standards as yet, with dyers and finishers largely responsible.

Daily News Record, March 5, 1948, p.1.

"ESTRON" PROPOSED AS NAME FOR ACETATE RAYON

"Estron" will be proposed at the coming meeting of Committee D-13 of the A. S. T. M. as a term for acetate rayon. "Acetate" is said to be too general a term."

Daily News Record, p. 1.

CARBIDE AND CARBON STARTS PILOT PRODUCTION OF VINYON N; SEEKS NEW PRODUCERS

Carbide and Carbon Chemicals Corporation has completed a pilot plant for producing Vinyon N yarns at Charleston, W. Va., and plans to offer the resin for the production of Vinyon N fibers and yarns to rayon producers and others. The pilot plant is now making a limited poundage, stretched and unstretched, heat modified and not, which is available in ton lots and up for trial. Vinyon's "high strength and water resistance will make possible improved sports clothing, rainwear," etc. Dr. J. G. Davidson, President, said Vinyon might someday be as important to the

textile industry as acetic anhydride is now. In manufacture, 20 foot cells are used to remove acetone and the filaments are stretched up to 20 times to raise tenacity from 1 to 4 grams. Vinyon N yarns in development qualities are being sold at \$2.50 for 150 denier and heavier.

Daily News Record, Feb. 26, 1948, p. 1.

American Viscose Corp. is still producing and promoting Vinyon yarn made from CF resin, mainly for use in filter cloths. It sold a small amount of Vinyon N a year ago but abandoned it, on the grounds that the procedure was too costly for the firm to continue. Carbide & Carbon Chemicals Corp. is at present producing 15,000 pounds of Vinyon N yarn per month at its Charleston, West Virginia, pilot plant, of which 10,000 is being sold for industrial fabrics and the remainder given away for experiments. American Viscose is said to be working closely with C & C to develop a more economical method of spinning fine deniers of Vinyon N, but the Carbide Company would like to have other rayon companies take up production, selling them the resin." If no producer other than American Viscose is forthcoming, Carbide will erect its own large scale plant."

Journal of Commerce, Mar. 8, 1948

(American Viscose formerly was only concern selling Vinyon. Apparently C & C plans to sell resin to other concerns to make fiber, like Dow does with Saran.)

LINEN YARN MADE FROM DISCARDED FLAX STRAW

A new, cheap method to convert flax straw into linen yarn in four or five hours has been demonstrated at the University of Minnesota. The most important feature of the method is a chemical process which removes gums and other waste material from flax fiber in only half to three-quarters of an hour. The demonstration came after several years' work begun by R. F. Montanna, and carried on by Dr. L. H. Reyerson, professor of chemistry, and Dr. E. J. Amdur, research assistant to find a use for flax straw. Until recently the straw--about 2,000,000 tons a year--was burned. Now perhaps a quarter of the total is used for cigarette paper, and perhaps the rest could be used for making linen. Test indicate that linen made from local straw is equal in strength and quality to European linens. On a cost basis, Dr. Reyerson said he was hoping that linen yarn could be produced for as little as a dollar a pound. "Commercial use of processes developed here," Dr. Reyerson concluded, "would provide a market for a waste product and a profitable new industry for the State, with all the benefits of additional employment."

Daily Mill Stock Reporter, Feb. 19, 1948, p. 1.

WOOL MANUFACTURING MOVING TO SOUTH

The percentage of value of wool products manufactured in N.C., S.C., Ga., and Va., has increased from 1.1% in 1939 to 5% in 1945 at probably 8% today. Deering-Milliken placed 4 large worsted mills in operation in S. C. in 1947, J. P. Stevens has moved one worsted mill from Rhode Island to S. C. and is building two more in Ga., etc. Factors in trend to South are (1) old buildings and old equipment in New England mills, (2) development of American system of worsted spinning (which tends to

make old equipment obsolete, (3) lower taxes, (4) better labor supply, and (5) improved labor relations.

Daily News Record, Feb. 21, 1948, p. 4.

MOHAIR MEETS INCREASING COMPETITION; WILL NOT HAVE PRICE SUPPORT PROGRAM

Urging an educational campaign to promote mohair consumption Chester A. Jordan, head of Limerick Yarn Mills, Limerick, Me., said only remaining big users of mohair fabrics are the airliners, railroads, and theaters, with a less extensive use in parts of the automobile industry. Fabrics of various types, including synthetics, were said to be pushing mohair out of the picture in the automobile, furniture, and drapery industries.

Daily News Record, Mar. 9, 1948, p. 8.

The Agriculture Department will not set up a price support program on domestic mohair unless requested by Congress. Mohair was never made part of the 1947 Wool Act.

Daily News Record, Mar. 11, 1948, p. 6.

OBJECTIVE OF RMA WOOL RESEARCH STATED

The wool research advisory committee for the Research and Marketing Act has as its number one research objective - same as last year - an evaluation of future demands for different grades of wool so that domestic wool growers may adjust their breeding programs accordingly. Other projects involved (1) development of techniques and equipment to improve spinning qualities - of single wool fleeces; (2) preparation of representative foreign wool samples.

Daily News Record Feb. 17, 1948. p. 6.

UNITED WALLPAPER CUTS PAPER DRAPERY PRICES

Trimz Co., Inc., a division of United Wallpaper, Inc., has announced a price slash of 20% in Trimz ready-to-hang paper draperies. The new price for all regular Trimz ready-to-hang paper draperies is \$1.19 as compared with a previous price of \$1.49 which has prevailed since their introduction during the war years. Closely resembling fabric in feel and appearance, Trimz paper draperies incorporate laboratory-tested features of "fadeproofness," flame resistance and cleanability and require no ironing. Each set of draperies is completely hemmed, headed and ready to hang.

Wall Street Journal, Feb. 13, 1948, p. 2.

TEXTILE RESEARCH

ARMY Q M ASKS FOR NEW RESEARCH CENTER

The Army Q M Corps is asking Congress for a new \$10 million clothing research laboratory near Boston where present research at Jeffersonville, Ind., Philadelphia, Lawrence, Mass., and New York will be brought together. In testimony General Middleswart said "the facility leased from Pacific Mills, Lawrence, Mass., is retained and operated largely through the tenuous thread of good will." Dr. A. Stuart Hunter said the Army currently has 255 research contracts, valued at \$4,800,000 with private

industry but that Army has to "pay industry 100 percent overhead for this work now."

Daily News Record Feb. 17, 1948, p. 1

R. M. A. CONTRACT RESEARCH PROJECTS ON COTTON APPROVED

Six cotton research projects have been approved by the Agriculture Dept. for development through contracts with private concerns as follows:

- (1) making cotton yarns suitable for high-speed tricot knitting;
- (2) improvement of resistance of cotton textiles to soilings;
- (3) use of infra-red techniques to study cotton cellulose deterioration;
- (4) improved control of neps in manufacture of cotton textiles;
- (5) improvement of cotton warp yarns for carpets;
- (6) development of improved instrument to determine strength of individual fibers.

Daily News Record, March 17, 1948, p. 2.

COORDINATED RESEARCH CENTER FOR COTTON HELD NEEDED

"One of the greatest needs of the cotton industry is a coordinating research center to set up programs, correlate the efforts, and evaluate the results." This agency could place research projects where the personnel and facilities are best suited to handle the specific problems. They could also act as an agency for the interchange of information.

Cotton Trade Journal, March 12, 1948, p. 11.

NEW COTTON TESTING LABORATORY PLANNED IN SOUTHWEST

An inspection party consisting of E. D. White, Dr. John W. Wright, and Dr. George R. Boyd have been inspecting sites in the Southwest for a new cotton testing Laboratory - including El Paso, Las Cruces, N. M., and Phoenix.

Cotton Trade Journal, March 12, 1948, p. 4.

DR. J. H. MOORE STARTS FIBER TESTING LABORATORY

Dr. Jerry H. Moore, cotton technologist at N. C. State College 1926-46, and director of fiber research for a textile company in 1946-47, has inaugurated a cotton fiber testing and consulting service at Mount Gilead, N. C. He plans to equip a complete laboratory for fiber testing with tests for fiber strength, length, fineness, neps, foreign matter, on raw cotton, cotton waste, linters, etc. The service also will include research on quality control. Later, some testing will be done on wool and synthetics.

Southern Textile News, Feb. 14, 1948, p. 2.

CHANGE IN ATMOSPHERIC TEST CONDITIONS OPPOSED

About 35 representatives of all segments of the textile industry, including cotton, rayon and wool, held an all-day session in the Willard Hotel on March 4th to formally protest unanimously the proposal by the Federal Specifications Board Technical Committee to change the atmospheric standard to 73.5° F. and 50% R.H. from the present 70° F. and 65% R.H. The change was desired in order to have uniform conditions for all materials. However, the industry spokesmen

(largely cotton interests) said new standards would invalidate existing data; they would cause cotton to test 8% weaker, rayon 8% stronger; moisture regain would be drastically affected; costly equipment would be needed for 50% R. H.; changes in humidity would drastically affect many cotton goods sold on a weight basis. 65% humidity was said to be closest to average service conditions throughout this country.

Daily News Record, March 5, 1948. p. 26.

COTTONSEED AND PEANUTS

VICARA PRICE AND SPECIFICATIONS ANNOUNCE

Virginia-Carolina Chemical Corp. will begin production of "a vegetable protein fiber" at the former Aralac Plant, Taftville, Conn., in May, according to W. P. terHorst, general manager of the fiber division. The plant has a rated capacity of 10 million pounds per year but may do considerably better. Its equipment is now undergoing modification.

The new fiber, Vicara, will be sold in two deniers, 1.5 and 4, in various staple lengths, at \$1 per pound. It will be sold on specifications. It has been used experimentally in women's wear fabrics, men's hosiery, infants' wear, men's sportswear and knitting yarns, in blends with wool, acetate, viscose, cotton and nylon. Blankets are considered a potential use. "While yarns and fabrics have been made experimentally with 100% vicara, most contain 75% of the fiber and none less than 50%."

Vicara's properties are as follows:

Tensile strength (grams per denier) Dry (Normal): 0.95 to 1.05: Wet, 0.5 to 0.6: Elongation at break: Dry (Normal) 30 to 35% : Wet 30 to 35%. Elastic recovery: 95% at 2% stretch.

Total water absorbency: 20%.

Specific gravity: 1.24.

Regain: 13% at 65°F and 70 R.H.

Burning rate: Relatively slow.

Effect of heat: Decomposes at 450°F.

Effect of age: None. Sunlight: Slowly weakened. Acids:

Stable to weak, decomposed by strong. Alkalies:

Stable to weak, embrittled by heating in strong.

Affinity for dyes: Can be dyed at the boil with acid or chrome dyes in conventional manner.

Solubility in organic solvents: Insoluble.

Resistance to moths: Nonpalatable.

Mildew: Resistant.

(The fiber is said to have "good resistance to laundering." It "can be bleached, can be made moisture repellent or moisture absorbent," has "good scuff resistance", is "warm to the touch" and has good "crimp.")

Daily News Record, Feb. 27, 1948. p. 1.

(It is noted that wet strength is poorer than any present commercial fiber though not much poorer than acetate rayon, or some wools, and apparently much better than commercial casein fiber. Price of \$1 per pound may be compared with \$1.27 for fine Territory Wools, 93 cents for 1/4 blood combing Territory wools, and 65 cents for

carpet wools in bond.)

AVERAGE COTTONSEED ANALYSES GIVEN FOR UNITED STATES, 1944-1946.

Of the cottonseed produced in the United States, only 14 percent in 1945 and 13 percent in 1946 was not delivered to oil mills for crushing. Average analyses and grades of cottonseed for the entire country are shown in table 6. (The quantity index measures the combined oil and cake or meal in the cottonseed based on a formula involving the relationship in the value of the two. The quality index "measures the deterioration in oil and meal and takes into account the excesses of moisture and foreign matter." Both indexes are combined in the average grade index.)

Table 6.- Average qualities of cottonseed, United States,
1944-1946

| | 1944 | 1945 | 1946 |
|----------------------|---------|---------|---------|
| <hr/> | | | |
| Cottonseed analysis: | Percent | Percent | Percent |
| Oil | 18.5 | 18.6 | 18.7 |
| Ammonia | 3.88 | 3.62 | 3.61 |
| Moisture | 11.2 | 12.2 | 12.4 |
| Free fatty acids | 1.4 | 2.6 | 1.0 |
| Foreign matter | 0.8 | 1.1 | 0.8 |
| <hr/> | | | |
| Average index: | Index | Index | Index |
| Quantity | 102.33 | 101.02 | 101.29 |
| Quality | 96.8 | 93.0 | 98.0 |
| Average grade | 99.0 | 93.5 | 99.5 |
| | : | : | : |

Compiled from Cottonseed Quality in the United States, 1946.
Cotton Branch, P.M.A., Feb. 1948.

OIL PRICES RISE SLIGHTLY

Prices of vegetable oils have increased slightly from the low point reached earlier in the year; but are still substantially below 1947 levels. Cottonseed and meal prices are now lower than in January but higher than in March 1947. (Table 7.)

Table 7.- Price of vegetable oils and meals

| | March 15 | February 16 | January | March | September |
|-----------------|----------|-------------|---------|-------|-----------|
| | 1948 | 1948 | 1948 | 1947 | 1946 |
| Cents per pound | | | | | |
| <u>OILS</u> | | | | | |
| Cottonseed oil | 23.5 | 21.0 | 29.0 | 36.0 | 12.5 |
| Peanut oil | 23.5 | 21.0 | 29.5 | 36.6 | 13.0 |
| Soybean oil | 21.0 | 19.0 | 28.0 | 33.6 | 11.8 |
| Corn oil | 23.5 | 23.5 | 32.0 | 36.4 | 12.8 |
| Coconut oil | 22.5 | 19.0 | 25.5 | 26.1 | 11.1 |
| Linseed oil | 29.3 | 31.3 | 34.3 | 38.6 | 16.6 |
| Tung oil | 26.7 | 26.2 | 27.5 | 38.8 | 39.0 |
| Dollars per ton | | | | | |
| <u>MEALS</u> | | | | | |
| Cottonseed meal | 79.00 | 80.00 | 97.60 | 74.90 | 62.75 |
| Peanut meal | 82.00 | 90.00 | 94.95 | 71.40 | 67.25 |
| Soybean meal | 84.00 | 65.00 | 110.25 | 81.00 | 66.00 |
| Coconut meal | 81.00 | 84.00 | 81.00 | 60.40 | 59.70 |
| Linseed meal | 73.00 | 85.00 | 113.25 | 85.60 | 59.25 |

1/ January 12 quotations for oils, monthly quotations for meals.

2/ Crude, tanks, f.o.b. mills except noted. From Oil Paint and Drug Reporter (daily quotations) and from Fats and Oils Situation, BAE (monthly quotations).

3/ Crude, tanks, Pacific Coast. 7/ 41 percent protein, Memphis

4/ Raw, drums, carlots, N.Y. 8/ 45 percent protein, S.E. Mills

5/ Drums, carlots, N.Y. 9/ 41 percent protein, Chicago

6/ Bagged carlots. As given in Feedstuffs 10/ 19 percent protein, Los Angeles

(daily quotations) and Feed Situation, 11/ 32 percent protein, Minneapolis, prior to May 1947; 34 percent protein after that date.

LINTERS AND CELLULOSE

PRICE OF DISSOLVING WOOD PULP INCREASED SLIGHTLY

A new price schedule on domestically-produced dissolving wood pulp was announced effective March 15th with price increases of \$9 per ton for standard and high-tenacity viscose grade and of \$10 per ton for the acetate and cupra grade. The cost of wood pulp per pound of standard viscose rayon is now about 3.4 cents higher than in 1945. The price of purified linters remained unchanged from January to February.

Table 8.- Average annual prices of purified linters and dissolving wood pulp, 1945-47, and monthly quotations October (1947)- March (1948)

Cents per pound

| | Purified linters 1/ | Standard viscose grade | High-Tenacity viscose grade | Wood pulp, 2/ & cupra grade | Acetate |
|------------------|---------------------------|------------------------------|-----------------------------------|-----------------------------------|---------|
| 1945 | 8.7 | 4.8 | 5.0 | | 5.5 |
| 1946 | 9.5 | 5.6 | 5.8 | | 6.2 |
| 1947 | 16.3 | 7.0 | 7.4 | | 8.0 |
| 1947, October | 12.50 | 7.10 | 7.55 | | 8.20 |
| 1947, November | 13.25 | 7.10 | 7.55 | | 8.20 |
| 1947, December | 13.25 | 7.45 | 7.90 | | 8.60 |
| 1948, January | 13.00 | 7.45 | 7.90 | | 8.60 |
| 1948, February | 13.00 | 7.45 | 7.90 | | 8.60 |
| 1948, March 15th | 8.00 | 7.85 | 8.35 | | 9.10 |

1/ Weighted averages, 1945-47. Compiled from letters from a producer.- F.O.B. pulp plant.

2/ Average of average monthly prices, 1945-47. Compiled from Rayon Organon and from letters to us from producer. Wood pulp prices are F.O.B. domestic producing mill, full freight allowed, and 3% transportation tax allowed, December 1, 1947 on; freight equalized with that Atlantic or Gulf port carrying lowest backhaul rate to destination plus 3% of backhaul charges, prior to December 1st.

LINTERS USE IN RAYON DECLINES

Consumption of linters pulp in the rayon industry declined both absolutely and relative to wood pulp during 1947. As indicated in table 9, linters pulp now comprises only 17% of the cellulose used for all rayon, only 13% of the cellulose used for viscose plus cupra rayon, and 31% of the quantity used for acetate rayon. "Wood pulp is used almost entirely for the regular tenacity types of yarn and staple. For the intermediate and high tenacity types, however, producers' practices vary, ranging from the use of 100% wood pulp, to blends of linters and wood pulp, and on to 100% linters." In 1947, the rayon industry consumed about 353,000 bales of linters, or the equivalent of 31% of last year's domestic raw cotton linters production, and 62% of the total supply, (domestic production plus imports less exports) of dissolving wood pulp.

Rayon Organon, March 1948, p. 37.

Table 9.- Approximate quantities of linters pulp and wood pulp used in rayon by processes, United States, 1940-47

| Process and year | : | | | : | | | Total |
|---------------------------|---------|-------|-------|---------|---------|---------|---------|
| | Linters | | Wood | Linters | | Wood | |
| | pulp | pulp | Total | pulp | pulp | Wood | Total |
| | | | | | | | |
| | 1,000 | 1,000 | 1,000 | | | | |
| | tons | tons | ttons | Percent | Percent | Percent | Percent |
| <u>All processes</u> | | | | | | | |
| 1940 | 60 | 178 | 238 | 25 | 75 | 100 | 100 |
| 1942 | 40 | 280 | 320 | 11 | 89 | 100 | 100 |
| 1945 | 103 | 297 | 400 | 26 | 74 | 100 | 100 |
| 1946 | 105 | 323 | 428 | 25 | 75 | 100 | 100 |
| 1947 | 80 | 401 | 481 | 17 | 83 | 100 | 100 |
| | | | | | | | |
| <u>Viscose and cupra:</u> | | | | | | | |
| 1945 | 80 | 245 | 325 | 25 | 75 | 100 | 100 |
| 1946 | 75 | 272 | 347 | 22 | 78 | 100 | 100 |
| 1947 | 49 | 333 | 382 | 13 | 87 | 100 | 100 |
| | | | | | | | |
| <u>Acetate</u> | | | | | | | |
| 1945 | 23 | 52 | 75 | 31 | 69 | 100 | 100 |
| 1946 | 30 | 51 | 81 | 37 | 63 | 100 | 100 |
| 1947 | 31 | 68 | 99 | 31 | 69 | 100 | 100 |

All process and percentage data from Rayon Organon, March 1948, page 37, Our estimates of quantities by viscose and cupra, and acetate processes.

NEW DISSOLVING WOOD PULP PLANTS FOR SOUTH RUMOURED

"There have been reports that International Paper and Power Co., largest producer of pulp for the rayon industry, would locate a new plant in the South for the production of dissolving pulp, and that Rayonier would open another. The Alfred I duPont interests, controlling enormous areas of forest land in Florida, also have been reported as being interested in the development of a dissolving pulp plant, in addition to their kraft paper operations....So rapid has been the paper and pulp industry development in the South during the past 10 or 15 years that, except in areas controlled by the paper companies themselves, the annual cut is in excess of the annual growth.

Daily News Record, Feb. 27, 1948. p. 6.

